**Topic:** Planets in our Solar System

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**Grade Level:** 3rd grade

**Goals:** Investigate and explain the planets

**Essential Questions:** What is each of our planets and what are they like?

**Unit Summary:** Students will investigate each of the planets. In the first lesson they investigate one planet then share what they learned to teach the class. The next lesson takes what they learned and applying it to create a digital story. The 3rd lesson brings it all together having them take a little fun quiz online and them lets them explore a website with games and lots of additional information.

**Subject Areas:** Science and ELA

**Connections:** We live on planet earth but how much do we really know about it and all the other planets in our solar system?

**Tags:** Science, Planets, Solar System

**Lesson 1:**

**Objectives:**

Students will be able to:

* Investigate the planets using the internet.
* Collect and organize the data using worksheets and inspiration.

**Learning Standards:**

**New York Learning Standards**

**Math, Science, and Technology:**

**Standard 4:** **Science** Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

**Standard 5:** **Technology** Students will apply technological knowledge and skills to design, construct, use and evaluate products and systems to satisfy human and environmental needs.

**Standard 6: Interconnectedness: Common Themes** Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

**English Language Arts**

**Standard 1**: Language for Information and Understanding

Students will listen, speak, read, and write for information and understanding. As listeners and readers, students will collect data, facts, and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to acquire, interpret, apply, and transmit information.

**Materials:**

* Internet
* Data Collection Sheets
* Pencil
* Inspiration

**Procedures:**

1. Get put into groups of 3.
2. Each group gets 3 data collecting sheets to split up between the members.
3. Each group member will go to the directed sites and fill out their data collection sheets.
4. Then they will go back into their groups to go over the information they found.
5. As a group they will make a web on inspiration using the information they on their planet.
6. Then everyone will come together and each group will share their web.

**Critical Thinking:**

Students can find information on planets through lots of different types of media. Technology helps the most because it allows the information to become interactive and they get a better view at the planets then they could in a book.

**Differentiated Instruction:**

This lesson is great for kinesthetic learners because it is hands on. They are exploring the internet finding the facts. The web will help the spatial learners. It also benefits interpersonal and intrapersonal learners for they work individually and in small groups. This lesson accommodates students who have a hard time reading because the websites that they are find their information on can be read to them.

**Resources:**

* Websites for finding data:

<http://starchild.gsfc.nasa.gov/docs/StarChild/solar_system_level1/planets.html>

<http://www.enchantedlearning.com/subjects/astronomy/planets/>

* Webquest that helped me develop lesson:

<http://olc.spsd.sk.ca/DE/webquests/Planetwq/WebQuest2.html#form>

* Other great resources:

http://www.windows.ucar.edu/

**Assessments:**

* [Rubric](Planets%20Rubric.docx)
* Inspiration web
* [Data Collection sheets](Planets%20worksheets.docx)

**Lesson 2:**

**Objectives:**

Students will be able to:

* Tell a story using knowledge on each planet.

**Learning Standards:**

**New York Learning Standards:**

**Math, Science, and Technology:**

**Standard 5:** **Technology** Students will apply technological knowledge and skills to design, construct, use and evaluate products and systems to satisfy human and environmental needs.

**Standard 6: Interconnectedness: Common Themes** Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

**English Language Arts:**

**Standard 2:** Language for Literary Response and Expression

Students will read and listen to oral, written, and electronically produced texts and performances from American and world literature; relate texts and performances to their own lives; and develop an understanding of the diverse social, historical, and cultural dimensions the texts and

performances represent. As speakers and writers, students will use oral and written language that follows the accepted conventions of the English language for self-expression and artistic creation.

**Materials:**

* Internet
* Windows Movie Maker
* Sketch up
* Headset with microphone

**Procedures:**

1. Get students back into planet groups.
2. Using the facts they found have them create a digital story about their planet.
3. Some example of a storyline can be of them being real estate agents selling the planet, or a made up story using real facts.
4. They can use pictures them find in books, online, or drawings made by them on sketch up.
5. Then we will watch each group’s of the videos.

**Critical Thinking:**

Anybody anywhere can access Windows Movie Maker to create a digital story.

**Differentiated Instruction:**

This lesson is hands on and full of pictures which are great for kinesthetic and spatial learners. They also have to work in groups which benefits interpersonal learners.

**Resources:**

* Window Movie Maker

**Assessments:**

* Digital story

**Lesson 3:**

**Objectives:**

Students will be able to:

* Bring together everything they have learned so far about planets to take a quiz on an interactive site.

**Learning Standards:**

**New York Learning Standards**

**Math, Science and Technology:**

**Standard 4:** **Science** Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

**Standard 5:** **Technology** Students will apply technological knowledge and skills to design, construct, use and evaluate products and systems to satisfy human and environmental needs.

**Standard 6: Interconnectedness: Common Themes** Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

**Materials:**

* Internet
* You tube video
* NASA site for quiz and other games

**Procedures:**

1. Watch you tube video about the planets.
2. Discuss each of the planets and all the information they have learned so far.
3. Go on to the directed site and answer questions on interactive quiz.
4. When they are finished they can click on the home button and explore the site about NASA.
5. They can play the games, color, find more information, or do puzzles.

**Critical Thinking:**

Anybody in any country can find videos or websites on planets. This video is great because it’s easy to understand as a young student and short. The website they are exploring is our countries most well know space program. They should have already heard about NASA before this lesson.

**Differentiated Instruction:**

This is great for kinesthetic learners because it’s all exploring and hands on. The quiz is especially great for spatial learners because the answers are pictures of planets as well as the name. This lesson is also done individually so it benefits the intrapersonal learner. This lesson is also great for students to work well with their ability. If they are a struggling learner they will stick to the educational games and the more advanced learner will push for more information that is provided for them.

**Resources:**

* You Tube Video on Planets:

<http://www.youtube.com/watch?v=3f_aic7nmY8>

* Interactive Quiz:

<http://www.nasa.gov/audience/forkids/kidsclub/flash/games/levelfive/KC_Solar_System.html>

**Assessments:**

* Interactive quiz score